

AMENDMENTS TO THE SPECIFICATION

(Please replace the first full paragraph on page 6 (lines 5-28), as set forth in the following replacement paragraph.)

Figure 3 depicts an add/drop node 26 of the prior art having cascaded filters to satisfy traffic demand. At each intermediate add/drop node of the network, single wavelength add/drop filter cassettes (SWACs) 31 are cascaded in separate cards or chassis. Each filter cassette corresponds to a particular wavelength in the signal, and contains two end connectors 30. As the multiplexed signal passes through each filter cassette, the particular wavelength channel corresponding to the filter is extracted from the signal and converted to the electrical domain. Conversely, information to be added is converted from the electrical domain to an optical signal of a wavelength corresponding to a particular filter cassette, and inserted into the multiplexed signal. The arrangement illustrated in Figure 3 incurs a high loss in the network, as each connector 30 in the node generates a loss in the signal power. In addition to a loss in the signal power for transmission through each filter, this translates into a significant optical power loss when dropping a wavelength and when adding a wavelength. For example, for current implementations, each connector generates a loss of 0.25 dB in addition to a 0.5 dB loss through each filter. This translates into a loss of 1dB when dropping a wavelength and 1 dB for adding a wavelength. The total loss to the signal at each node of the embodiment illustrated in Figure 3 is 2 dB times the number of wavelengths that are accessed at each node, as each wavelength to be accessed has an individual cascaded filter cassette. In addition to incurring a high loss in the signal, the arrangement illustrated in Figure 3 is complicated. Each wavelength that is accessed by the node requires two connectors 30, a multiplexer 34, a demultiplexer 35, a ~~transmitter~~ 36 ~~transmitter~~ 37 for converting an electrical signal to an optical signal of the respective wavelength, and a ~~receiver~~ 37 ~~receiver~~ 36 for converting the optical signal corresponding to the respective wavelength to an electrical signal.